

Application No. 09/550,103

Filed: April 14, 2000

TC Art Unit: 1647

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A method of assessing the effectiveness of a therapeutic process or agent for treating schizophrenia or a related neuropsychiatric disorder in a patient, comprising the steps of:

(a) making an initial determination of the level of phospholipid methylation in a tissue sample from a patient;

(b) administering to the patient the therapeutic process or agent to be assessed;

(c) making a subsequent determination of the level of phospholipid methylation in the patient; and

(d) comparing the corresponding levels of phospholipid methylation from steps (a) and (c), wherein an increase in the level of phospholipid methylation subsequent to administration of the therapeutic process or agent indicates that the therapeutic process or agent is effective for treating said patient.

2. (Withdrawn) The method of claim 1, wherein the determination of the level of phospholipid methylation is carried out by labelling of the methylfolate pool.

3. (Withdrawn) The method of claim 2, wherein the level of phospholipid methylation is determined by labelling the methylfolate pool with [ $^{14}\text{C}$ ]-formic acid.

4. (Withdrawn) The method of claim 1, wherein steps (b), (c) and (d) are carried out more than once.

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5. (Currently Amended) A method of identifying a therapeutic process or agent for treating schizophrenia or a related neuropsychiatric disorder wherein said related neuropsychiatric disorder has the feature of involving modification of dopamine D4 receptor-linked phospholipid methylation and wherein ~~involving a dopamine D4 receptor,~~ said method ~~comprising~~ comprises the steps of:

(a) establishing an assay system comprising a cultured cell line, said cultured cell line either naturally expressing D<sub>4</sub> receptors or transfected with the D<sub>4</sub> receptor gene;

(b) making an initial determination of the level of phospholipid methylation in cells of said cell line;

(c) administering to cells of said cell line the candidate therapeutic process or agent to be assessed;

(d) making a subsequent determination of the level of phospholipid methylation in cells of said cell line; and

(e) comparing the corresponding levels of phospholipid methylation from steps (b) and (d), wherein an increasea change in the level of phospholipid methylation subsequent to administration of the candidate therapeutic process or agent indicates that the candidate process or agent is potentially therapeutically effective for treating schizophrenia or said related neuropsychiatric disorder.

6. (Original) The method of claim 5, further including, prior to step (e), the step of determining the level of phospholipid methylation in the presence or absence of added D<sub>4</sub> receptor agonists and/or antagonists.

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7. (Original) The method of claim 5, wherein the determination of the level of phospholipid methylation is carried out by labelling of the methylfolate pool.

8. (Original) The method of claim 6, wherein the level of phospholipid methylation is determined by labelling the methylfolate pool with [ $^{14}\text{C}$ ]-formic acid.

9. (Original) The method of claim 5, wherein steps (c), (d) and (e) are carried out more than once.